

# Recovery Plan Action Status

Plan Name: Zapata Bladderpod (*Lesquerella thamnophila*) Recovery Plan

Plan Status: Final

Plan Date: 25-Aug-04

Lead Agency: USFWS

Lead Office: Corpus Christi Ecological Services Field Office

(361-994-9005)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Zapata bladderpod ( <i>Lesquerella thamnophila</i> )	1	1.1	Familiarize landowners with information on the rarity, significance, and threats; encourage stewardship agreements	Planned	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, The Nature Conservancy, Texas Parks and Wildlife Department, Lower Rio Grande Valley National Wildlife Refuge	Other: Information and Education	Internal Field Assistance, Species Expert	Continued protection of existing populations is crucial to the species' survival
Zapata bladderpod ( <i>Lesquerella thamnophila</i> )	2	1.2.1	Determine landowner short-term and long-term land use goals	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, The Nature Conservancy, Texas Parks and Wildlife Department, Lower Rio Grande Valley National Wildlife Refuge	Research: Habitat Status	Species Expert	Necessary for outreach and conservation. In FY08, DHS contractors surveyed for presence along proposed routes of border fence.
Zapata bladderpod ( <i>Lesquerella thamnophila</i> )	1	1.2.2	Develop and implement management plans for known sites	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, The Nature Conservancy, Texas Parks and Wildlife Department, Lower Rio Grande Valley National Wildlife Refuge	Management: Habitat Maintenance and Manipulation	Internal Field Assistance, Species Expert	Years 4 and 5 \$5000 See comment 1.1

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Zapata bladderpod (Lesquerella thamnophila)	1	1.2.3	Develop monitoring program with voluntary landowner assistance	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Department of Transportation, The Nature Conservancy, Texas A&M University, Texas Parks and Wildlife Department, Texas Department of Transportation, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Other: Information and Education	Species Expert	Years 4 and 5 \$3000. See comment 1.1
Zapata bladderpod (Lesquerella thamnophila)	1	1.3	Encourage enforcement of applicable laws and regulations	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Department of Transportation, U.S. Fish and Wildlife Service, Law Enforcement Division, Texas Parks and Wildlife Department, Texas Department of Transportation, Lower Rio Grande Valley National Wildlife Refuge	Other: Administration, Other: Law Enforcement, Other: Regulations	Internal Administrative, Internal Field Assistance	See comment 1.1

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Zapata bladderpod (Lesquerella thamnophila)	1	2	Search for new populations	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Department of Transportation, Texas A&M University, Texas Parks and Wildlife Department, Texas Department of Transportation, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Population Surveys	Internal Field Assistance, Species Expert	
Zapata bladderpod (Lesquerella thamnophila)	2	3.1.1	Study soils and underlying geology	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Department of Transportation, Texas A&M University, Texas Parks and Wildlife Department, Texas Department of Transportation, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Habitat Requirements	Species Expert	Expert botanist reported in 2004 that plants are associated with sandstone outcrops where a stratum of fossil oyster shell is lying above sandstone; soil is usually yellowish sandy loam containing gypsum.

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Zapata bladderpod (Lesquerella thamnophila)	2	3.1.2	Determine community structure	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Demographic Studies	Species Expert	Necessary for surveying and reintroduction efforts
Zapata bladderpod (Lesquerella thamnophila)	1	3.1.3.1	Study direct and indirect effects of land use practices on Zapata bladderpod and its associated habitat	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Habitat Requirements	Species Expert	Years 4 and 5 \$2000. See comment 1.1. A journal article by several south Texas botanists was accepted into The Southwestern Naturalist in 2010; publication date of the article was not available. This article discusses the impact of clearing vegetation on the density, growth, and reproduction of species.

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Zapata bladderpod (Lesquerella thamnophila)	3	3.1.3.2	Study response periodic or cyclic processes such as flooding, fire, and freezing temperatures	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Other Information	Species Expert	Years 4 and 5 \$2000.
Zapata bladderpod (Lesquerella thamnophila)	2	3.1.3.3	Study interactions with other species (beneficial and negative).	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Demographic Studies	Species Expert	Years 4 and 5 \$2000

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Zapata bladderpod (Lesquerella thamnophila)	1	3.2.1	Conduct a demographic analysis of the populations	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Demographic Studies	Species Expert	Years 4 and 5 \$2000
Zapata bladderpod (Lesquerella thamnophila)	2	3.2.2	Characterize phenology	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Other Information	Species Expert	Years 4 and 5 \$3000

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Zapata bladderpod (Lesquerella thamnophila)	2	3.2.3	Study pollination biology	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Environmental Protection Agency, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Propagation	Species Expert	Years 4 and 5 \$3000
Zapata bladderpod (Lesquerella thamnophila)	2	3.2.4	Study seed production and dispersal in the wild	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Propagation	Species Expert	Years 4 and 5 \$3000

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Zapata bladderpod (Lesquerella thamnophila)	2	3.2.5	Study seedling recruitment	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de México, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Research: Other Information	Species Expert	Years 4 and 5 \$3000
Zapata bladderpod (Lesquerella thamnophila)	2	3.2.6	Study population genetics to determine genetic diversity within and among populations.	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Texas A&M University, Texas Parks and Wildlife Department, University of Texas - Pan American, National Wildlife Refuge	Research: Genetics, Research: Taxonomic Studies	Contract, Species Expert	Necessary for reintroduction (comment from 2006). Both in 2005 and 2006, plant biologists and experts were initiating molecular work. Because of this genetics work (that was done in 2002), a taxonomic change back to Physaria from Lesquerella is warranted.
Zapata bladderpod (Lesquerella thamnophila)	1	4	Establish a botanical garden population and seed bank	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Center for Plant Conservation, San Antonio Botanical Gardens, Texas Parks and Wildlife Department, Lower Rio Grande Valley National Wildlife Refuge	Research: Management Techniques	Species Expert	Necessary to ensure survival in long-term management agreements are not sufficient to preserve the species



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Zapata bladderpod (Lesquerella thamnophila)	3	5	Establish new populations as necessary to meet downlisting criteria.	Unknown	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, The Nature Conservancy, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de Mexico, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Management: Reintroduction	Species Expert	Years 4 and 5 \$5000 (comment from 2006).
Zapata bladderpod (Lesquerella thamnophila)	3	6	Develop a public information and awareness program	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, The Nature Conservancy, Texas A&M University, Texas Parks and Wildlife Department, Universidad Autónoma de Tamaulipas, Universidad Nacional Autónoma de Mexico, University of Texas - Pan American, Lower Rio Grande Valley National Wildlife Refuge, South Texas Community College	Other: Information and Education	Internal Field Assistance	Years 4 and 5 \$2000 / \$2000 (comment from 2006).
Zapata bladderpod (Lesquerella thamnophila)	3	7	Develop delisting criteria and a post-delisting monitoring plan	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, The Nature Conservancy, Texas Parks and Wildlife Department, Lower Rio Grande Valley National Wildlife Refuge	Other: Regulations	Internal Technical Assistance	No costs associated unless it is determined that a recovery team should be convened. In regards to this comment from 2006, a South Texas Plant Recovery Team was initiated in 2010.